Ready or not

In a previous thought leadership piece, Michael James, director of project management in the Middle East, discussed why a simultaneous three-way ‘convergence’ between design and construction technologies, construction delivery and the regulatory framework is vital to support technical innovation.

This article develops this idea with a micro-level view into construction’s concept design stage. Under the right circumstances and for the right project and client, the software industry’s agile project management method offers an interesting alternative that re-vision the concept design stage, flips the process over and unlocks untapped potential. The focus is on creating a project definition that is fully informed by the most up-to-date economics, technologies and opportunities.

At the start of every project is a vision, which becomes more defined through the design stages and is made concrete during construction. This pre-contract process, and the early concept and scoping phase in particular, is by its very nature highly iterative. An organisation may not know what it wants yet, but will certainly be seeking maximum value from clever opportunity creation. To optimise this, the entire engagement and contracting method would ideally be set up to unlock the project’s greatest potential. Creativity and innovation are bred by recognising that individuals are the ultimate source of value. Creating an enabling contractual environment where they can make a difference will allow the organisation to obtain maximum value.

Today, the pre-contract project team, usually led by the project manager, is increasingly being challenged to envision a structure that enables proactive and quick adaptation to change, in order to focus fully on value creation.

It may now be the right time to consider ‘agile project management’ as an alternative working method in the concept stage, which is a model developed by the software industry. This may well hold the key to unlocking extra value. As we move relentlessly into a virtual future (some, like Elon Musk, say we’re already cyborgs with all our electronic appendages!), the now well-tested ‘agile’ approach is focused on thriving in - and actually enjoying - an unpredictable environment.

There are several compelling reasons why ‘agile’ methods can benefit construction in concept stage:

- The agile approach is well suited to today’s markets, being known to thrive in situations of rapid change, dynamism and disruptive technologies, politics and economics.
- The mindset is more important than the method. Setting up the right contracting environment will unlock minds to focus on creating value.
- Digital tools are universal in design and cost processes, with manual processes becoming increasingly automated. The adoption of BIM in all of its dimensions and uses is the new normal.
- The transition between design and construction will continue to evolve further into one continuous activity. Construction delivery is increasingly converging with software-based building solutions, reducing the time from idea to execution.

Most projects are volatile to different extents, and are subject to unforeseeable chaotic inputs and emergent requirements. Project managers are expected to do their best to ensure that
the effects of these changes can be mitigated and that the project can run to plan. Agile thinking fundamentally differs, in that change is recognised as inevitable and therefore embraced in order to accept immediate responsiveness to external factors. Most importantly, it enhances value - which is everything.

The familiar ‘plan-driven’ pyramid is turned upside down by the ‘value-driven’ agile approach. This is where, for the right project and the right organisation, we can consciously rethink the front-end process and obtain more value.

As an industry, we’re familiar with typically adversarial contracting, with disagreements over what constitutes scope change commonplace. In the set-up of such a ‘re-visioned’ concept stage, the design contract’s project scope will require new contractual definition. It should only be defined as far as the team is currently able to comprehend and prioritise it from the perspectives of value realisation and risk mitigation, while accepting that it is unpredictable, uncertain and likely to change.

As a consequence, we will also be compelled to re-educate ourselves as to what constitutes ‘value’ through a more complex and intuitive understanding of the big picture.

Such a new workplan may appear more as an iterative series of ‘sprint processes’, which will not be limited to a sequential series of predefined milestones and gateways. It should empower small multidisciplinary teams to iteratively, incrementally and continuously develop value through the transformation of emergent and evolving requirements, products or processes which involve and provide early enhanced value.

Consultants’ time and effort can be used to continually recombine ‘thinking’ (planning) and ‘doing’ (following the plan). Excessive lists of deliverables and documentation can be considered wasteful at this stage. Effort is instead placed on testing and re-testing ideas, and building automated processes linked to smart 4D digital models (which output into 3D printed parts) to improve understanding and expedite the iterative feasibility, cost and approvals processes.

Access to real-time data, akin to a live project Twitter feed using data sharing via ‘Slack’ for example, is key to linking different project team assets, multiple time zones and participants in delivering joined-up large-scale projects in real-time thinking and with co-ordinated data.

We still need people to do the clever work. Technology exists to support us, not replace us. Are you ready for the agile approach? We’re already doing it in Dubai, so ready or not, here it comes.